AMENDMENTS TO THE CLAIMS

1.   (Withdrawn) A method of obtaining a subject's physiological history from a sample analysis, the method comprising the steps of:

(a) measuring an amount of a cellular modification for each of a plurality of cells from a biological sample;

(b) sorting the cell measurements from step (a) as a function of the amount of modification; and,

(c) determining a physiological history for the subject by analyzing the ordered cell measurements.

2.   (Withdrawn) The method of claim 1, wherein the physiological history is indicative of a disease or disorder in the subject.

3.   (Withdrawn) The method of claim 2, wherein the disease or disorder is diabetes.

4.   (Withdrawn) The method of claim 3, wherein the diabetes is Type I diabetes.

5.   (Withdrawn) The method of claim 3, wherein the diabetes is Type II diabetes.

6-24.   (Canceled)

25.   (Currently amended) A method for obtaining information about the blood glucose level history of a patient ~~diagnosed with diabetes~~, the method comprising the steps of:

(a) obtaining a blood sample comprising a plurality of intact red blood cells;

(b) sorting the plurality of intact red blood cells <u>as a function of a detected</u> ~~to measure an~~ amount of glycated hemoglobin for each cell and generating a cell distribution profile that represents the number of red blood cells as a function of the amount of glycated hemoglobin per cell; and,

(c) dividing the cell distribution profile into a series of bins each containing a number of cells representing a time interval and calculating a change in the amount of glycated hemoglobin for each bin, thereby obtaining information about the blood glucose level history of the patient for each time

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interval represented by the series of bins, wherein both the time interval and the blood glucose level are determined based on the detected amount of glycated hemoglobin.

26-27. (Canceled)

28.   (Previously presented) The method of claim 25, further comprising an algorithm that corrects for non-linearity in the rate of hemoglobin glycation.

29.   (Previously presented) The method of claim 25, further comprising an algorithm that uses patient specific input data.

30.   (Original) The method of claim 29, wherein the patient specific input data is selected from the group consisting of the patient's age, gender, and weight.

31.   (Previously presented) The method of claim 25, further comprising an algorithm that uses a value for the average life span of a red blood cell.

32.   (Original) The method of claim 25, wherein the intact cells are sorted using a procedure selected from the group consisting of chromatography, electrophoresis, mass spectrometry, and cell sorting.

33.   (Previously presented) The method of claim 25, comprising the additional step of using the information obtained about the blood glucose level history of the patient to assist in determining whether the patient has Type I, Type II, or gestational diabetes.

34.   (Previously presented) The method of claim 25, comprising the additional step of determining an anti-diabetic treatment regimen for the patient based on the information obtained about the blood glucose level history of the patient.

35.   (Original) The method of claim 25, comprising the step of obtaining a second blood sample at a second time and performing steps (b) and (c) on the second blood sample.

36.   (Original) The method of claim 25, wherein the glycosylated hemoglobin is labeled.

37.   (Withdrawn) A chromatography device for separating blood cells based on levels of glycosylated hemoglobin, the device comprising:

(a) a high pressure column comprising a sample chamber and a tapered exit hole;

(b) a dynamic light scattering detector connected to the exit hole; and,

(c) a gas powered injector connected to the sample chamber.

38.   (Withdrawn) An electrophoretic device for separating blood cells based on levels of glycosylated hemoglobin, the device comprising:

(a) a liquid flow column with a sample entry point and a plurality of collection points along the length of the column; and,

(b) an electromagnetic field generator associated with the column, wherein the electromagnetic field is normal to the direction of the liquid flow.